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10/558,270	12/04/2006	Satoshi Takemoto	070591-0040	1449

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EXAMINER	
HOANG, PHI	

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/558,270	TAKEMOTO ET AL.	
	Examiner	Art Unit	
	PHI HOANG	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02 April 2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01 July 2010 have been fully considered but they are not persuasive.

2. With regard to claims 1 and 9, Applicant states Harman does not disclose, "regarding a viewpoint image of the object to be stereoscopically displayed not to be deviated, an object on an adjacent side of the object to be stereoscopically displayed not to be deviated is rendered in such a manner that a location thereof is deviated toward the side of the deviation direction of the object on the adjacent side of the object to be stereoscopically displayed to be deviated the certain deviation amount."

However, Harman discloses layers of images, each with an object (Figure 2) that is shifted to determine the depth from a viewer when forming a stereoscopic image (Paragraphs 0063). In one example, Harman discloses that a layer (layer 1) with one object is not shifted for the stereoscopic display (Paragraph 0064). Lateral shifting is introduced allowing for a shift amount to be determined in order to create the effect of a more distant object from a viewer in the stereoscopic display (Paragraph 0065, lines 10-11, an object on layer 2 is shifted to increase the perceived depth). As a result, the object on layer 1 is stereoscopically displayed without requiring any shift and objects on subsequent layers are shifted to increase their relative depth when to the object on layers that are closer to a viewer. Furthermore, other layers with objects, such as layers 3 and 4 in figure 2, can have higher lateral shift compared to other layers, such as layer 1 and 2, to increase their perceived depth when a composite image is formed for

stereoscopic display (Figure 3 and paragraph 0067). Therefore, Harman along with Inoguchi discloses all limitations of claims 1 and 9.

Since the position of the Examiner on claims 1 and 9 is maintained, the Examiner's position on claims 2-8 and 10-16 is also maintained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harman (US 2002/0118275 A1) in view of Inoguchi et al. (US 5,945,965).

5. Regarding claim 1, Harman discloses a stereoscopic image display apparatus for generating a stereoscopic image based on a file, comprising: a means for determining a description in a file subject to a stereoscopic viewing-use process out of descriptions in the file (Page 5, paragraph 0077, lines 10-14, data file with data for shifting);

a means for determining a phase deviation (Page 4, paragraph 0065, lines 10-13) amount and a deviation direction (Page 4, paragraph 0065, lines 1-4, lateral shift can be performed in the left or right direction) of an object to be stereoscopically displayed based on the description indicating the stereoscopic viewing-use process

(Page 4, paragraph 0074);

and a rendering means for carrying out a rendering process of each viewpoint image of the object to be stereoscopically displayed based on the phase deviation amount and the deviation direction (Page 5, paragraph 0077, lines 1-10),

regarding a viewpoint image of the object to be stereoscopically displayed to be deviated, an object on an adjacent side of the object to be stereoscopically displayed is rendered in such a manner that a location thereof is deviated toward a side of the deviation direction of the object to be stereoscopically displayed to be deviated by a certain deviation amount, (Figures 1-3 and paragraph 0059 and 0066, objects in certain layers can be shifted to produce a stereoscopic image)

and regarding a viewpoint image of the object to be stereoscopically displayed not to be deviated, an object on an adjacent side of the object to be stereoscopically displayed not to be deviated is rendered in such a manner that a location thereof is deviated toward the side of the deviation direction of the object on the adjacent side of the object to be stereoscopically displayed to be deviated the certain deviation amount (Figures 1-3 and paragraph 0063-0064, an object in a layer does not need to be shifted while other objects in other layers are shifted to produce a stereoscopic image).

Harman does not clearly disclose determining only a portion of descriptions in a file subject to a stereoscopic viewing-use process.

Inoguchi discloses displaying a mixed image of a two dimensional partial image non-stereoscopically and a three-dimensional partial stereoscopic image (Column 7, lines 46-56).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Harman to display only parts of an image stereoscopically as disclosed by Inoguchi because background and foreground images can be displayed so as to emphasize foreground images stereoscopically within a scene of a non-stereoscopic background.

6. Regarding claim 2, Harman discloses the object to be stereoscopically displayed is rendered over an object adjacent thereto, or the object adjacent thereto is rendered over the object to be stereoscopically displayed corresponding to the phase deviation amount and the deviation direction when a rendering process in which the location of the object on the adjacent side is deviated is not executed (Page 4, paragraph 0063 and paragraph 0065, lines 1-3, layers of objects placed over another).

7. Regarding claim 3, Harman discloses the object to be stereoscopically displayed, which is to be rendered over, is rendered in such a manner as to be translucent (Page 3, paragraph 0048, variable transparency).

8. Regarding claim 4, Harman discloses the rendering-over process is executed when there is in the file a description indicating that the rendering-over process is to be carried out (Page 5, paragraph 0077, a data file containing shift information is used for rendering the stereoscopic image).

9. Regarding claim 5, Harman discloses regarding each viewpoint image of the object to be stereoscopically displayed, an object on an adjacent side of the object to be stereoscopically displayed is rendered in such a manner that a location thereof is

deviated toward a side of the deviation direction of the object to be stereoscopically displayed (Figures 1-3) only by an amount equal to or larger than the phase deviation amount (Page 4, paragraph 0065).

10. Regarding claim 6, Harman discloses a rendering process in which the location of the object on the adjacent side is deviated is executed when there is in the file a description indicating that the rendering process in which the location of the object on the adjacent side is deviated is to be carried out (Page 5, paragraph 0077, lines 10-14, the data file contains data for shifting).

11. Regarding claims 7 and 15, Harman discloses in a case that extent information as information indicating the phase deviation amount is described in the file, the phase deviation amount is calculated based on information of a previously retained setting table and the extent information (Page 4, paragraph 0066).

12. Regarding claims 8 and 16 Harman discloses in a case that the object to be stereoscopically displayed is stereoscopically displayed on a near side, the object to be stereoscopically displayed is expanded and rendered, and in a case that the object to be stereoscopically displayed is stereoscopically displayed on a far side, the object to be stereoscopically displayed is reduced in size and rendered (Page 3, paragraph 0049, the size of the object changes as it moves over time).

13. Regarding claim 9, Harman discloses a processor-readable medium tangibly embodying a set of processor-executable instructions, wherein execution of the instructions causes a processor to perform operations comprising: (Page 2, paragraph

0033, lines 11-16) determining a descriptions in a file subject to a stereoscopic viewing-use process out of descriptions in the file (Page 5, paragraph 0077, lines 10-14, data file with data for shifting);

determining a phase deviation amount (Page 4, paragraph 0065, lines 10-13) and a deviation direction (Page 4, paragraph 0065, lines 1-4, lateral shift can be performed in the left or right direction) of an object to be stereoscopically displayed based on the description indicating the stereoscopic viewing-use process (Page 5, paragraph 0074);

carrying out a rendering process of each viewpoint image of the object to be stereoscopically displayed based on the phase deviation amount and the deviation direction (Page 5, paragraph 0077, lines 1-10),

regarding a viewpoint image of the object to be stereoscopically displayed to be deviated, an object on an adjacent side of the object to be stereoscopically displayed is rendered in such a manner that a location thereof is deviated toward a side of the deviation direction of the object to be stereoscopically displayed to be deviated by a certain deviation amount, (Figures 1-3 and paragraph 0059 and 0066, objects in certain layers can be shifted to produce a stereoscopic image)

and, regarding a viewpoint image of the object to be stereoscopically displayed not to be deviated, an object on an adjacent side of the object to be stereoscopically displayed not to be devised is rendered in such a manner that a location thereof is deviated toward the side of the deviation direction of the object on the adjacent side of the object to be stereoscopically displayed to be deviated by the certain deviation

amount (Figures 1-3 and paragraph 0063-0064, an object in a layer does not need to be shifted while other objects in other layers are shifted to produce a stereoscopic image).

Harman does not clearly disclose determining only a portion of descriptions in a file subject to a stereoscopic viewing-use process.

Inoguchi discloses displaying a mixed image of a two dimensional partial image non-stereoscopically and a three-dimensional partial stereoscopic image (Column 7, lines 46-56).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Harman to display only parts of an image stereoscopically as disclosed by Inoguchi because background and foreground images can be displayed so as to emphasize foreground images stereoscopically within a scene of a non-stereoscopic background.

14. Regarding claim 10, Harman discloses a computer to function as a means for rendering the object to be stereoscopically displayed over an object adjacent thereto, or rendering the object adjacent thereto over the object to be stereoscopically displayed corresponding to the phase deviation amount and the deviation direction (Page 4, paragraph 0063 and paragraph 0065, lines 1-3, layers of objects placed over another).

15. Regarding claim 11, Harman discloses a means for rendering the object to be stereoscopically displayed, which is to be rendered over, in such a manner as to be translucent (Page 3, paragraph 0048, variable transparency).

16. Regarding claim 12, Harman discloses a means for executing the rendering-over process when there is a description indicating the rendering-over process in a file (Page 5, paragraph 0077, a data file containing shift information is used for rendering the stereoscopic image).

17. Regarding claim 13, Harman discloses a means for rendering an object on an adjacent side of the object to be stereoscopically displayed in such a manner that a location thereof is deviated toward a side of the deviating direction of the object to be stereoscopically displayed (Figures 1-3) only by an amount equal to or larger than the phase deviation amount, regarding each viewpoint image of the object to be stereoscopically displayed (Page 4, paragraph 0065).

18. Regarding claim 14, Harman discloses a means for executing a rendering process in which the location of the object on the adjacent side is deviated when there is in a file a description indicating that the rendering process in which the location of the object on the adjacent side is deviated is carried out (Page 5, paragraph 0077, lines 10-14, the data file contains data for shifting).

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHI HOANG whose telephone number is 571-270-3417. The examiner can normally be reached on Mon-Fri, 8:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on 571-272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phi Hoang/
Examiner, Art Unit 2628
September 29, 2010

/XIAO M. WU/
Supervisory Patent Examiner, Art Unit 2628